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(54) **AUTOMATED CLEANING SYSTEMS FOR  
AUTONOMOUS VEHICLES**

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(71) Applicant: **Uber Technologies, Inc.**, San  
Francisco, CA (US)

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(72) Inventor: **Daniel Adam Kanitz**, Pittsburgh, PA  
(US)

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**ABSTRACT**

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Systems and methods are directed to automated cleaning systems for vehicles. In one example, a vehicle is provided that includes a drive system, a passenger cabin, and a vehicle cleaning system. The vehicle cleaning system includes a vacuum unit and a robotic manipulator. The robotic manipulator includes an arm including a plurality of arm sections and a gripper unit positioned at a distal end of the arm. The robotic manipulator is connected to the vacuum unit such that the arm provides a vacuum path between the vacuum unit and the gripper unit.

